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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,409	04/08/2004	Gregory J. May	200312860-1	7814

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FORT COLLINS, CO 80527-2400

EXAMINER

WOLLSCHLAGER, JEFFREY MICHAEL

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/820,409	<b>Applicant(s)</b> MAY, GREGORY J.	
	<b>Examiner</b> Jeff Wollschlager	<b>Art Unit</b> 1732	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 4-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

The amendment to the claims filed May 2, 2006 has been entered. Claims 2, 3, 11 and 12-25 have been cancelled. Claims 1 and 4-10 are pending.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 4-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is indefinite because it recites forming "the identifiable structure". There is insufficient antecedent basis for this limitation at this point in the claim. Additionally, the claim has repetitive information that makes the claim indefinite. For example, the recitation, "disposing at least one layer of the first material onto the second area and the designated area using at least one ink-jet printhead", provides the same teaching as earlier statements in the claim. For the purposes of examination, the repetitive information and lack of antecedent were viewed in context of the entire apparent teaching of the claim.

Claim 4 is indefinite because it recites that it depends from claim 3. Claim 3 has been cancelled. For the purposes of examination, the claim is understood to depend from claim 1.

***Claim Rejections - 35 USC § 103***

Claims 1 and 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monkhouse et al. (U.S. Patent 6,547,994; issued April 15, 2003) in view of Zhong et al. (U.S. Patent 6,676,987; issued January 13, 2004) or Jagmin (U.S. Patent 5,044,955; issued September 3, 1991).

Regarding claim 1, Monkhouse et al. teach a method of producing a three-dimensional object comprising the steps: disposing at least one layer of a first material onto a first area in an iterative manner using at least one ink-jet printhead, wherein the first material is selected from a build material and a contrast enhancing material; disposing at least one layer of a second material and the first material onto the first area using at least one ink-jet printhead, wherein the second material is selected from a build material and a contrast enhancing material, wherein the second material being disposed onto a designated area, wherein the first material being disposed onto a second area, wherein the second area and the designated area are different areas of the first area, wherein the first material and the second material are not the same material; disposing at least one layer of the first material onto the second area and the designated area using at least one ink-jet printhead. Further, Monkhouse et al. teach incorporating identifiable material from the second material within the three dimensional object, wherein the identifiable material can be detected using non-invasive dimensional imaging devices for monitoring the device in vivo (Figure 1, col. 2, lines 54-60, col. 3,

lines 21-30 and 48-52; col. 4, lines 14-29, col. 5, lines 35-col. 6, line 32; col. 11, lines 21-34).

Monkhouse et al. do not expressly teach that the identifiable material forms an identifiable structure from at least one layer of the second material. However, Zhong et al. (col. 5, line 38-col. 6, line 6) and Jagmin (col. 2, lines 30-45; col. 4, lines 11-42; col. 5, lines 31-38) each individually teach an analogous method wherein they form an identifiable structure from identifiable material, where the identifiable structure can be detected using non-invasive dimensional imaging.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to modify the method of Monkhouse et al. of producing a three-dimensional object comprising identifiable material with the teaching of either Zhong et al. or Jagmin of producing a three-dimensional object comprising an identifiable structure, for the purpose, as taught by both Zhong et al. (col. 6, lines 1-6) and Jagmin (col. 2, lines 30-36), of identifying the source of the appliance and other history related to it for tracking purposes.

As to claims 4-6, Zhong et al. (col. 2, lines 15-20; col. 3, lines 61-67; col. 5, line 38-col. 6, line 6; col. 6, lines 62-67) and Jagmin (Figure 1 and Figure 2; col. 4, line 11-41) individually teach a plurality of identifiable structures are formed and that the identifiable structures are fabricated from either the build material or the contrast enhancing material.

As to claim 7, Monkhouse et al. teach the build strategy may create various geometries (col. 4, lines 14-29) including pores and channels (col. 5, lines 50-59) and

Jagmin teaches the identifiable structure forms a combination of a contrast enhancing material and a gap to form a letter (Figure 1 and 2), bar code characters, or binary code characters (col. 5, lines 31-38).

As to claim 8, Monkhouse et al. teach incorporating radiopaque materials such as barium or other imaging agents (col. 1, lines 30-35). Implicitly these materials can be seen by an X-ray device, for example.

As to claim 9, the radiopaque material taught by Monkhouse et al. is a colorant. Further, the references teach employing microparticles such as fillers.

As to claim 10, Jagmin teaches the identifiable structure is a letter, bar code characters, or binary code characters (col. 5, lines 31-38) and Zhong et al. teach the identifiable structure is a bar code (col. 6, lines 1-6).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1 and 4-10 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

All claims are rejected.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

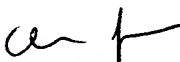
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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

JW

Jeff Wollschlager  
Examiner  
Art Unit 1732

June 26, 2006

  
CHRISTINA JOHNSON  
PRIMARY EXAMINER  
6/30/06